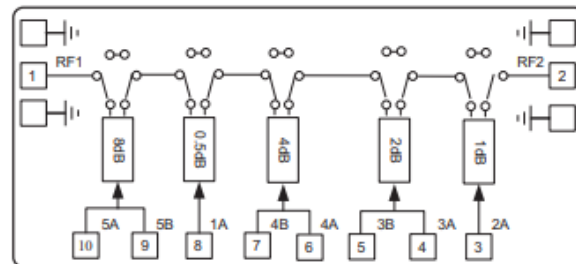


Features

- Attenuation Range: 0.5dB – 15.5dB
- Attenuation Accuracy: ± 0.5 dB
- Insertion Loss: 3.1dB
- Attenuation Additional Phase Shift: $\pm 3^\circ$
- Impedance: 50 Ω
- Die Size: 2.7 x 1.4 x 0.1 mm

Typical Applications

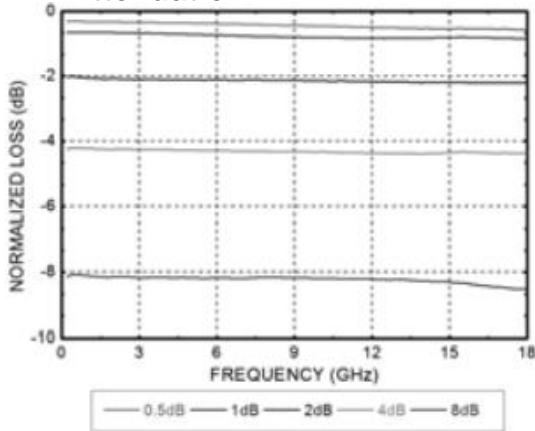
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Functional Block Diagram

Electrical Specifications
TA = +25°C, Vctl = 0/-5V

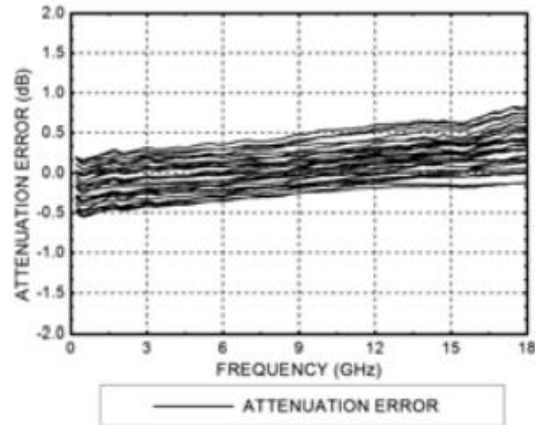
Parameters	Min.	Typ.	Max.	Units
Frequency	0.5-18			GHz
Insertion Loss		3.1		dB
Attenuation Range	0.5		15.5	dB
Attenuation Accuracy		± 0.5		dB
Attenuation Additional Phase Shift		± 3		$^\circ$
Return Loss		15		dB
Input 1dB Compression (P1dB)		24		dBm
Switching Speed		30		ns



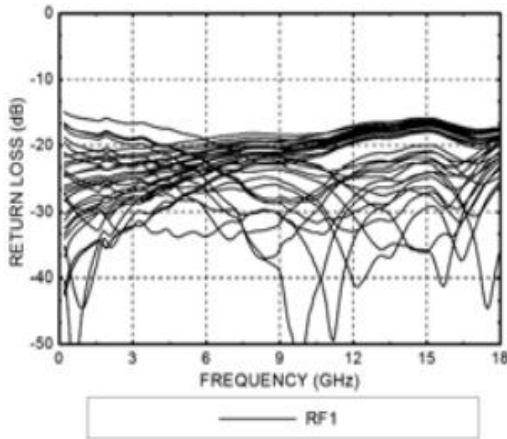
Attenuation



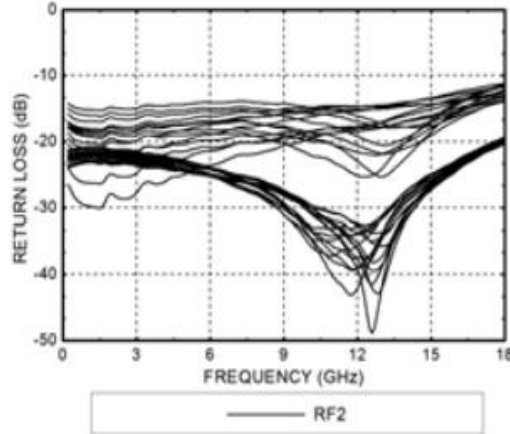
Attenuation Accuracy vs. Frequency



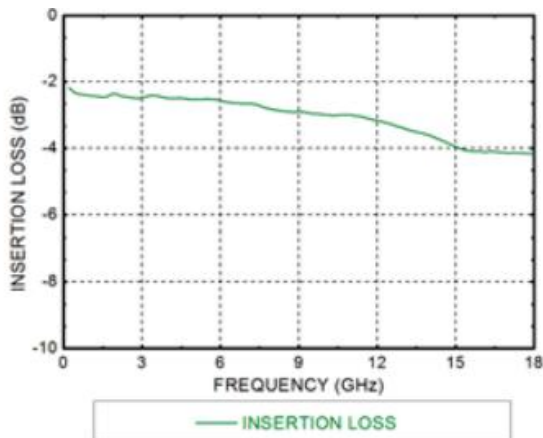
Input Return Loss



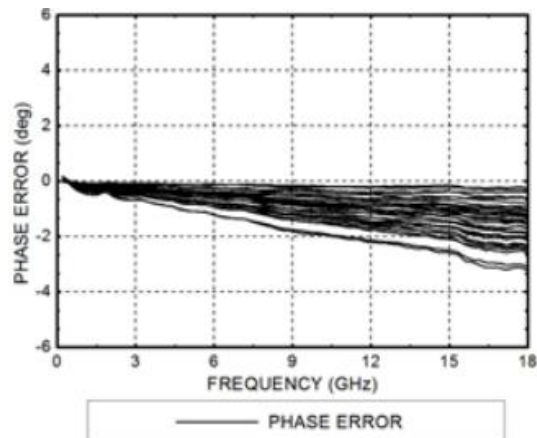
Output Return Loss



Insertion Loss

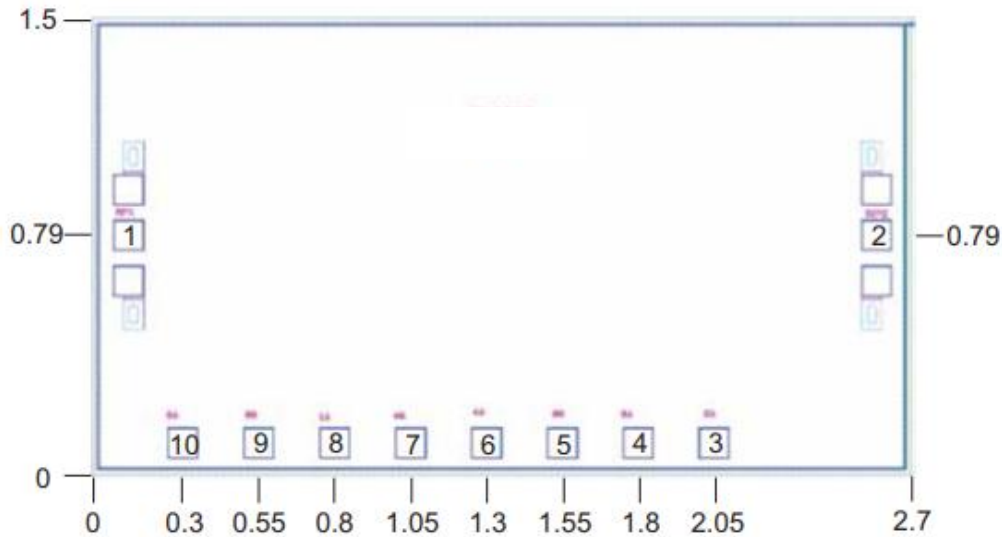


Relative Phase vs. Frequency





Outline Drawing:
All Dimensions in mm

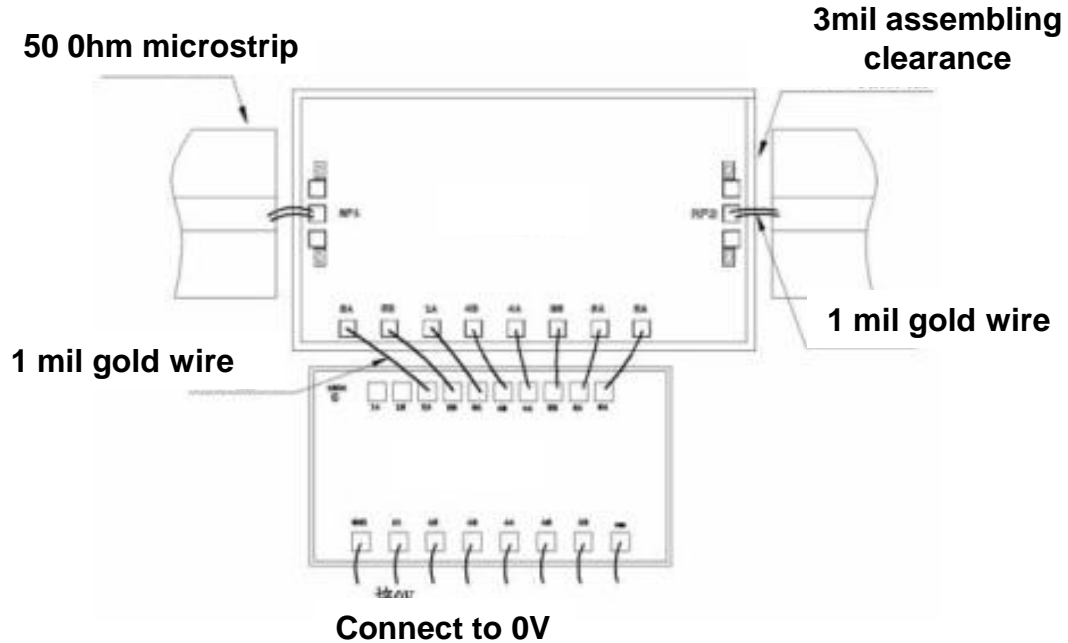


Pad Description

PAD	Function	Description
1	RF1	This pad is RF port and matched to 50Ω Impedance
2	RF2	This pad is RF port and matched to 50Ω Impedance
3	1dB Damping Control End 2A	2A=-5V, pass-through ; 2A=0V,decaying 1dB
4, 5	2dB Damping Control End 3A 3B	3A=-5V, 3B=0V, pass-through ; 3A=0V,3B=-5V, decaying 2dB
6, 7	4dB Damping Control End 4A 4B	4A=-5V, 4B=0V, pass-through ; 4A=0V,4B=-5V, decaying 4dB
8	0.5dB Damping Control End 1A	1A=-5V, pass-through ; 1A=0V,decaying 0.5dB
9, 10	8dB Damping Control End 5B 5A	5A=-5V, 5B=0Vpass-through ; 5A=0V,5B=-5V decaying 8dB
Die Bottom	GND	Die bottom must be connected to RF/DC ground



Assembly Drawing



Notes:

1. Die thickness: 100um
2. Typical bond pad is 100*100 μm^2
3. Bond pad metalization: Gold
4. Backside metalization: Gold
5. Backside of the die (GND)
6. No connection required for unlabeled bond pads

Maximum Ratings:

1. RF input power: +24dBm
2. Storage temperature: -65°C to +175°C
3. Operating temperature: -55°C to +85°C